

Transportation Active Safety Institute

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Abstract

Since its founding in February 2006, the mission of the Transportation Active Safety Institute (TASI) has been to advance the use of active safety systems to reduce vehicle crashes and save lives. TASI was one of 10 centers awarded IUPUI Signature Center funding (second round) in January, 2008. With core faculty drawn from ten departments representing eight schools at IUPUI, IUB and PUWL, the Transportation Active Safety Institute (TASI) is an interdisciplinary center for advanced transportation safety research and development on the IUPUI campus. Partnership with industry, government, and non-profit agencies ensures that university research activities complement existing technologies and address existing and future needs. TASI aims to provide a neutral forum for pre-competitive discussion and development of standards and test methodologies for establishing objective benefits of active-safety systems.

TASI has established a driving simulator laboratory for research into driver behavior and for testing active safety system performance. The state-of-the-art DriveSafety DS-600c Driving Simulator is providing a flexible and realistic driving environment for industry, government, and internally sponsored research. This reconfigurable platform allows TASI to test various sensors and driver interfaces, in order to determine effective and convenient solutions to challenges in enhancing safety. Faculty members, research staff and graduate students have been working on several funded research projects such as human factors for semi-autonomous driving systems, intelligent human vehicle interfaces, real vehicle testing for crash-imminent braking system (autonomous braking system), distracted and impaired driving assessment, teen and older driver safety research, dealing with uncertainty in autonomous braking system, etc.

TASI has also established an active dialog with other vehicle safety centers around the world through our “Global Academic Network for Active Safety.” Currently, global academic partners include Center for Automotive Research at the Ohio State University, National Advanced Driving Simulator at University of Iowa, University of Wisconsin, Tsinghua University in China, and Chalmers University of Technology in Sweden.